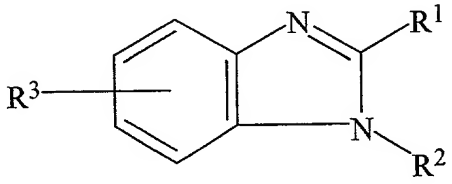
WHAT IS CLAIMED IS:

1. A method for inducing apoptosis in a cell expressing a tumor suppressor gene comprising administering an effective amount of a benzimidazole to said cell, wherein the expression of the tumor suppressor gene by the cell and the benzimidazole results in the apoptosis of the cell.

2. The method of claim 1, wherein the benzimidazole is a derivative having the formula:



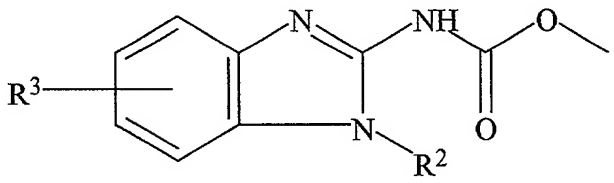
wherein R^3 is selected from the group consisting of H, carboxyl ($-CO_2H$), hydroxyl, amino, chloro, difluormethoxy, benzoyl, phenyl-thio, pyridinyl, propyl-thio, diphenyl, methoxy(methoxy-dimethyl,pyridinyl)methyl-(sulfonyl), fluorophenylmethyl-2-chloro, propenyl, chloroprophyl or esters ($-CO_2R^4$) wherein R^4 is selected from the group consisting of alkoxy, haloalkyl, alkenyl, and cycloalkyl, wherein the alkyl groups have from 1 – 8 carbons, or $CH_3CH_2(OCH_2CH_2)_n-$, or $CH_3CH_2CH_2(OCH_2CH_2CH_2)_n-$, or $(CH_3)_2CH(OCH(CH_3)CH_2)_n-$, wherein n is from 1 – 3, wherein R^1 is OH, Cl, SH, carbamate or piperidin-4-yl, and R^2 is hydrogen, α-methylvinyl, 3-chloropropyl or piperidin-4-yl, or the pharmaceutically effective organic or inorganic salts thereof, or mixtures thereof.

3. The method of claim 2, wherein the benzimidazole derivative is methyl 5-benzoylbenzimidazole-2-carbamate (mebendazole).

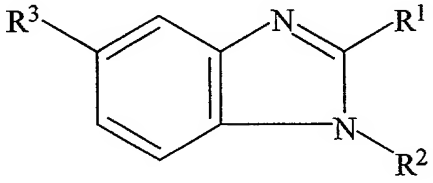
4. The method of claim 2, wherein the benzimidazole derivative is methyl 5-(phenylthio)-2-benzimidazole carbamate (fenbendazole).

5. The method of claim 2, wherein the benzimidazole derivative is 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole (omeprazole).

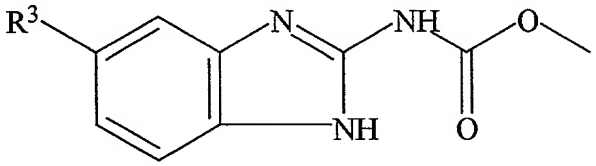
6. The method of claim 2, wherein the benzimidazole derivative is



7. The method of claim 2, wherein the benzimidazole derivative is



8. The method of claim 2, wherein the benzimidazole derivative is



9. The method of claim 1, wherein the dose of benzimidazole is at least 0.05 μg/ml.

10. The method of claim 1, wherein benzimidazole administration is repeated at least once.

11. The method of claim 1, wherein said method is used to treat rheumatoid arthritis, inflammatory bowel disease or restenosis.

12. The method of claim 1, wherein the cell is a tumor cell.

13. The method of claim 12, wherein the tumor cell is a multidrug resistant tumor cell.

14. The method of claim 13, wherein the multidrug resistant tumor cell is a lung tumor cell, a non-small cell lung carcinoma cell, a breast cancer cell, or a sarcoma cell.

15. The method of claim 12, wherein the tumor cell is a lung tumor cell.

16. The method of claim 15, wherein the lung tumor cell is a non-small cell lung carcinoma cell.

17. The method of claim 12, wherein the tumor cell is a breast cancer cell.

18. The method of claim 12, wherein the tumor cell is a sarcoma cell.

19. The method of claim 12, wherein the tumor suppressor gene is p53, p16, p21, Rb, p15, BRCA1, BRCA2, zac1, p73, ATM, HIC-1, DPC-4, FHIT, NF2, APC, DCC, PTEN, ING1, NOEY1, NOEY2, PML, OVCA1, MADR2, WT1, 53BP2, IRF-1, MDA-7 and C-CAM.

20. The method of claim 12, wherein the tumor suppressor gene is MDA-7.

21. The method of claim 12, wherein the tumor suppressor gene is p53.

22. The method of claim 12, further comprising the step of determining the tumor suppressor gene status of the tumor cell prior to method of claim 1.

23. The method of claim 22, wherein determining comprises Southern blotting.

24. The method of claim 22, wherein determining comprises Northern blotting.

25. The method of claim 22, wherein determining comprises PCR.

26. The method of claim 22, wherein determining comprises ELISA.

27. The method of claim 22, wherein determining comprises Western blotting.

28. The method of claim 22, wherein determining comprises immunofluorescence.

29. The method of claim 12, wherein the tumor cell expresses a functional tumor suppressor gene.

30. The method of claim 12, further comprising tumor suppressor gene therapy.

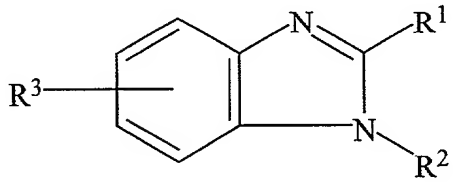
31. A method for inducing apoptosis in a cell comprising the steps of:

a) administering to the cell a vector comprising a polynucleotide sequence encoding a tumor suppressor gene operably linked to a transcription control region; and

b) administering to the cell an effective amount of a benzimidazole,

wherein the expression of the tumor suppressor gene by the cell and the administration of the benzimidazole results in the apoptosis of said cell.

32. The method of claim 31, wherein the benzimidazole is a derivative having the formula:



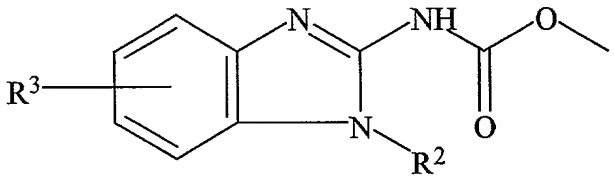
wherein R^3 is selected from the group consisting of H, carboxyl ($-CO_2H$), hydroxyl, amino, chloro, difluormethoxy, benzoyl, phenyl-thio, pyridinyl, propyl-thio, diphenyl, methoxy(methoxy-dimethyl,pyridinyl)methyl-(sulfonyl), fluorophenylmethyl-2-chloro, propenyl, chloroprophyl or esters ($-CO_2R^4$) wherein R^4 is selected from the group consisting of alkoxy, haloalkyl, alkenyl, and cycloalkyl, wherein the alkyl groups have from 1 – 8 carbons, or $CH_3CH_2(OCH_2CH_2)_n-$, or $CH_3CH_2CH_2(OCH_2CH_2CH_2)_n—$, or $(CH_3)_2CH(OCH(CH_3)CH_2)_n—$, wherein n is from 1 – 3, wherein R^1 is OH, Cl, SH, carbamate or piperidin-4-yl, and R^2 is hydrogen, α-methylvinyl, 3-chloropropyl or piperidin-4-yl, or the pharmaceutically effective organic or inorganic salts thereof, or mixtures thereof.

33. The method of claim 32, wherein the benzimidazole derivative is methyl 5-benzoylbenzimidazole-2-carbamate (mebendazole).

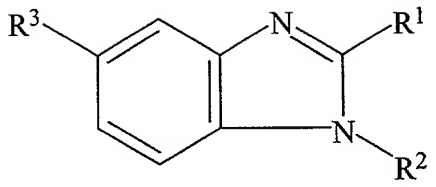
34. The method of claim 32, wherein the benzimidazole derivative is methyl 5-(phenylthio)-2-benzimidazole carbamate (fenbendazole).

35. The method of claim 32, wherein the benzimidazole derivative is 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole (omeprazole)

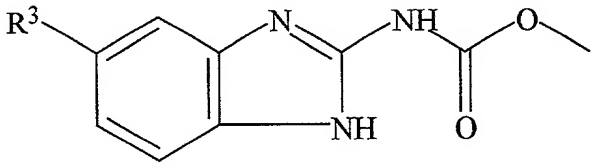
36. The method of claim 32, wherein the benzimidazole derivative is



37. The method of claim 32, wherein the benzimidazole derivative is



38. The method of claim 32, wherein the benzimidazole derivative is



39. The method of claim 31, wherein the tumor suppressor gene is p53, p16, p21, Rb, p15, BRCA1, BRCA2, zac1, p73, ATM, HIC-1, DPC-4, FHIT, NF2, APC, DCC, PTEN, ING1, NOEY1, NOEY2, PML, OVCA1, MADR2, WT1, 53BP2, IRF-1, MDA-7 and C-CAM.

40. The method of claim 31, wherein the tumor suppressor gene is MDA-7.

41. The method of claim 31, wherein the tumor suppressor gene is p53.

42. The method of claim 31, wherein said method is used to treat rheumatoid arthritis, inflammatory bowel disease or restenosis.

43. The method of claim 31, wherein the cell is a tumor cell.

44. The method of claim 43, wherein the tumor cell is a multidrug resistant tumor cell.

45. The method of claim 44, wherein the multidrug resistant tumor cell is a lung tumor cell, a non-small cell lung carcinoma cell, a breast cancer cell, or a sarcoma cell.

46. The method of claim 43, wherein the tumor cell is a lung tumor cell.

47. The method of claim 46, wherein the lung tumor cell is a non-small cell lung carcinoma cell.

48. The method of claim 43, wherein the tumor cell is a breast cancer cell.

49. The method of claim 43, wherein the tumor cell is a sarcoma cell.

50. The method of claim 31, wherein the vector is a virus.

51. The method of claim 50, wherein the virus is adenovirus, adeno-associated virus, herpesvirus, retrovirus, polyoma virus, vaccinia virus or lentivirus.

52. The method of claim 50, wherein the virus is an adenovirus.

53. The method of claim 52, wherein the adenovirus is replication defective.

54. The method of claim 52, wherein the adenovirus is lacking at least a portion of the E1B region.

55. The method of claim 31, wherein the tumor suppressor gene is under the control of a CMV IE promoter.

56. The method of claim 50, wherein the virus is an adeno-associated virus.

57. The method of claim 50, wherein the virus is a herpesvirus.

58. The method of claim 50, wherein the virus is a retrovirus.

59. The method of claim 50, wherein the virus is a polyoma virus.

60. The method of claim 50, wherein the virus is a vaccinia virus.

61. The method of claim 50, wherein the virus is a lentivirus.

62. The method of claim 31, wherein vector administration is repeated at least once.

63. The method of claim 31, wherein benzimidazole administration is repeated at least once.

64. The method of claim 31, wherein the dose of benzimidazole is at least 0.05 μg/ml.

65. The method of claim 43, further comprising the step of determining the tumor suppressor gene status of the tumor cell prior to method of claim 32.

66. The method of claim 65, wherein determining comprises Southern blotting.

67. The method of claim 65, wherein determining comprises Northern blotting.

68. The method of claim 65, wherein determining comprises PCR.

69. The method of claim 65, wherein determining comprises ELISA.

70. The method of claim 65, wherein determining comprises Western blotting.

71. The method of claim 65, wherein determining comprises immunofluorescence.

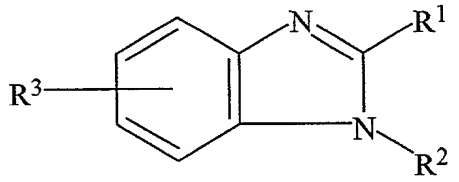
72. The method of claim 43, wherein the tumor cell expresses a functional endogenous tumor suppressor gene.

73. The method of claim 43, wherein the tumor cell expresses endogenous mutant tumor suppressor gene.

74. The method of claim 43, wherein the tumor cell expresses no endogenous tumor suppressor gene.

75. A method for treating a patient having cancer, wherein cancer cells express a tumor suppressor, comprising administering an effective amount of a benzimidazole to said patient, wherein the expression of the tumor suppressor gene by the cancer cell and the administration of the benzimidazole results in the inhibition of said cancer.

76. The method of claim 75, wherein the benzimidazole is a derivative having the formula:



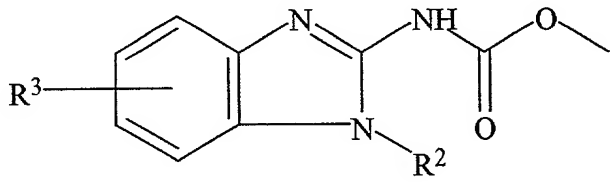
wherein R^3 is selected from the group consisting of H, carboxyl ($-CO_2H$), hydroxyl, amino, chloro, difluormethoxy, benzoyl, phenyl-thio, pyridinyl, propyl-thio, diphenyl, methoxy(methoxy-dimethyl,pyridinyl)methyl-(sulfonyl), fluorophenylmethyl-2-chloro, propenyl, chloroprophyl or esters ($-CO_2R^4$) wherein R^4 is selected from the group consisting of alkoxy, haloalkyl, alkenyl, and cycloalkyl, wherein the alkyl groups have from 1 – 8 carbons, or $CH_3CH_2(OCH_2CH_2)_n-$, or $CH_3CH_2CH_2(OCH_2CH_2CH_2)_n—$, or $(CH_3)_2CH(OCH(CH_3)CH_2)_n—$, wherein n is from 1 – 3, wherein R^1 is OH, Cl, SH, carbamate or piperidin-4-yl, and R^2 is hydrogen, α-methylvinyl, 3-chloropropyl or piperidin-4-yl, or the pharmaceutically effective organic or inorganic salts thereof, or mixtures thereof.

77. The method of claim 75, wherein the benzimidazole derivative is methyl 5-benzoylbenzimidazole-2-carbamate (mebendazole).

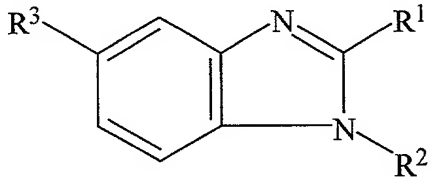
78. The method of claim 75, wherein the benzimidazole derivative is methyl 5-(phenylthio)-2-benzimidazole carbamate (fenbendazole).

79. The method of claim 75, wherein the benzimidazole derivative is 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole (omeprazole)

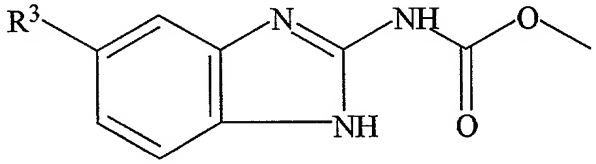
80. The method of claim 75, wherein the benzimidazole derivative is



81. The method of claim 75, wherein the benzimidazole derivative is



82. The method of claim 75, wherein the benzimidazole derivative is



83. The method of claim 75, wherein the tumor suppressor gene is p53, p16, p21, Rb, p15, BRCA1, BRCA2, zac1, p73, ATM, HIC-1, DPC-4, FHIT, NF2, APC, DCC, PTEN, ING1, NOEY1, NOEY2, PML, OVCA1, MADR2, WT1, 53BP2, IRF-1, MDA-7 and C-CAM.

84. The method of claim 75, wherein the tumor suppressor gene is MDA-7.

85. The method of claim 75, wherein the tumor suppressor gene is p53.

86. The method of claim 75, wherein the cancer cell is a multidrug resistant tumor cell.

87. The method of claim 86, wherein the multidrug resistant tumor cell is a lung tumor cell, a non-small cell lung carcinoma cell, a breast cancer cell, or a sarcoma cell.

88. The method of claim 75, wherein the cancer cell is a lung tumor cell.

89. The method of claim 88, wherein the lung tumor cell is a non-small cell lung carcinoma cell.

90. The method of claim 75, wherein the cancer cell is a breast cancer cell.

91. The method of claim 75, wherein the cancer cell is a sarcoma cell.

92. The method of claim 75, wherein benzimidazole administration comprises intratumoral administration.

93. The method of claim 75, wherein benzimidazole administration comprises systemic administration.

94. The method of claim 75, wherein benzimidazole administration comprises oral administration.

95. The method of claim 75, wherein benzimidazole administration comprises administration in the area local to a tumor in said patient.

96. The method of claim 75, wherein benzimidazole administration comprises administration in the area regional to a tumor in said patient.

97. The method of claim 75, wherein benzimidazole administration is repeated at least once.

98. The method of claim 75, wherein the dose of benzimidazole is about 0.1 mg per kg body weight.

99. The method of claim 75, wherein the dose of benzimidazole is about 1.0 mg per kg body weight.

100. The method of claim 83, further comprising the step of determining the tumor suppressor gene status of the cancer cell prior to method of claim 75.

101. The method of claim 100, wherein determining comprises Southern blotting.

102. The method of claim 100, wherein determining comprises Northern blotting.

103. The method of claim 100, wherein determining comprises PCR.

104. The method of claim 100, wherein determining comprises ELISA.

105. The method of claim 100, wherein determining comprises Western blotting.

106. The method of claim 100, wherein determining comprises immunofluorescence.

107. The method of claim 75, further comprising treating the patient with a second anti-cancer therapy selected from the group consisting of a chemotherapy, a radiotherapy, an immunotherapy, or a gene therapy.

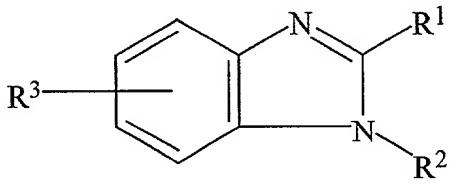
108. A method of treating a patient having cancer comprising the steps of:

a) administering to said patient a vector comprising a polynucleotide sequence encoding a tumor suppressor gene operably linked to a transcription control region; and

b) administering to said patient a therapeutically effective amount of benzimidazole,

wherein the expression of the tumor suppressor gene in a cancer cell and the administration of benzimidazole inhibits said cancer.

109. The method of claim 108, wherein the benzimidazole is a derivative having the formula:



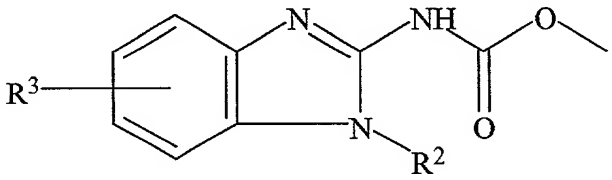
wherein R^3 is selected from the group consisting of H, carboxyl ($-CO_2H$), hydroxyl, amino, chloro, difluormethoxy, benzoyl, phenyl-thio, pyridinyl, propyl-thio, diphenyl, methoxy(methoxy-dimethyl,pyridinyl)methyl-(sulfonyl), fluorophenylmethyl-2-chloro, propenyl, chloroprophyl or esters ($-CO_2R^4$) wherein R^4 is selected from the group consisting of alkoxy, haloalkyl, alkenyl, and cycloalkyl, wherein the alkyl groups have from 1 – 8 carbons, or $CH_3CH_2(OCH_2CH_2)_n-$, or $CH_3CH_2CH_2(OCH_2CH_2CH_2)_n—$, or $(CH_3)_2CH(OCH(CH_3)CH_2)_n—$, wherein n is from 1 – 3, wherein R^1 is OH, Cl, SH, carbamate or piperidin-4-yl, and R^2 is hydrogen, α-methylvinyl, 3-chloropropyl or piperidin-4-yl, or the pharmaceutically effective organic or inorganic salts thereof, or mixtures thereof.

110. The method of claim 109, wherein the benzimidazole derivative is methyl 5-benzoylbenzimidazole-2-carbamate (mebendazole).

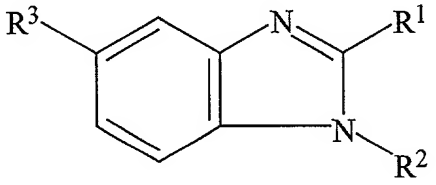
111. The method of claim 109, wherein the benzimidazole is methyl 5-(phenylthio)-2-benzimidazole carbamate (fenbendazole).

112. The method of claim 109, wherein the benzimidazole is 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole (omeprazole)

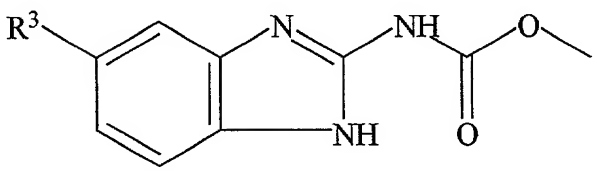
113. The method of claim 109, wherein the benzimidazole is



114. The method of claim 109, wherein the benzimidazole is



115. The method of claim 109, wherein the benzimidazole is



116. The method of claim 108, wherein the tumor suppressor gene is p53, p16, p21, Rb, p15, BRCA1, BRCA2, zac1, p73, ATM, HIC-1, DPC-4, FHIT, NF2, APC, DCC, PTEN, ING1, NOEY1, NOEY2, PML, OVCA1, MADR2, WT1, 53BP2, IRF-1, MDA-7 and C-CAM.

117. The method of claim 108, wherein the tumor suppressor gene is MDA-7.

118. The method of claim 108, wherein the tumor suppressor gene is p53.

119. The method of claim 108, wherein the cancer cell is a multidrug resistant tumor cell.

120. The method of claim 119, wherein the multidrug resistant tumor cell is a lung tumor cell, a non-small cell lung carcinoma cell, a breast cancer cell, or a sarcoma cell.

121. The method of claim 108, wherein the cancer cell is a lung tumor cell.

122. The method of claim 121, wherein the lung tumor cell is a non-small cell lung carcinoma cell.

123. The method of claim 108, wherein the cancer cell is a breast cancer cell.

124. The method of claim 108, wherein the cancer cell is a sarcoma cell.

125. The method of claim 108, wherein the vector is a virus.

126. The method of claim 125, wherein the virus is adenovirus, adeno-associated virus, herpesvirus, retrovirus, polyoma virus, or vaccinia virus.

127. The method of claim 125, wherein the vector is an adenovirus.

128. The method of claim 127, wherein the adenovirus lacks at least a portion of the E1B region.

129. The method of claim 127, wherein the adenovirus is replication defective.

130. The method of claim 108, wherein the polynucleotide sequence encoding the tumor suppressor gene is under the control of a CMV IE promoter.

131. The method of claim 125, wherein the virus is adeno-associated virus.

132. The method of claim 125, wherein the virus is a herpesvirus.

133. The method of claim 125, wherein the virus is a retrovirus.

134. The method of claim 125, wherein the virus is a polyoma virus.

135. The method of claim 125, wherein the virus is a vaccinia virus.

136. The method of claim 125, wherein the virus is a lentivirus.

137. The method of claim 108, wherein vector administration is repeated at least once.

138. The method of claim 108, wherein vector administration comprises intratumoral administration.

139. The method of claim 108, wherein vector administration comprises systemic administration.

140. The method of claim 108, wherein vector administration comprises administration in the area local to a tumor in said patient.

141. The method of claim 108, wherein vector administration comprises administration in the area regional to a tumor in said patient.

142. The method of claim 108, wherein benzimidazole administration comprises intratumoral administration.

143. The method of claim 108, wherein benzimidazole administration comprises systemic administration.

144. The method of claim 108, wherein benzimidazole administration comprises oral administration.

145. The method of claim 108, wherein benzimidazole administration comprises administration in the area local to a tumor in said patient.

146. The method of claim 108, wherein benzimidazole administration comprises administration in the area regional to a tumor in said patient.

147. The method of claim 108, wherein benzimidazole administration is repeated at least once.

148. The method of claim 108, wherein the dose of benzimidazole is about 0.1 mg per kg body weight.

149. The method of claim 108, wherein the dose of benzimidazole is about 1.0 mg per kg body weight.

150. The method of claim 108, further comprising the step of determining the tumor suppressor gene status of the cancer cell prior to method of claim 108.

151. The method of claim 150, wherein determining comprises Southern blotting.

152. The method of claim 150, wherein determining comprises Northern blotting.

153. The method of claim 150, wherein determining comprises PCR.

154. The method of claim 150, wherein determining comprises ELISA.

155. The method of claim 150, wherein determining comprises Western blotting.

156. The method of claim 150, wherein determining comprises immunofluorescence.

157. The method of claim 108, wherein the tumor cell expresses a functional endogenous tumor suppressor gene.

158. The method of claim 108, wherein the tumor cell expresses endogenous mutant tumor suppressor gene.

159. The method of claim 108, wherein the tumor cell expresses no endogenous tumor suppressor gene.

160. The method of claim 108, further comprising treating the patient with a second anti-cancer therapy selected from the group consisting of a chemotherapy, a radiotherapy, an immunotherapy, or a gene therapy distinct from the tumor suppressor provided.

161. A method for treating a patient with a hyperproliferative disorder comprising administering to said subject an amount of a benzimidazole effect to kill or inhibit the growth of hyperproliferative cells within said patient.

162. The method of claim 161, wherein said subject suffers from cancer.

163. The method of claim 162, further comprising treating the patient with an anti-cancer therapy selected from the group consisting of a chemotherapy, a radiotherapy, an immunotherapy, or a gene therapy.

164. A method for inhibiting angiogenesis in a subject comprising administering to said subject an amount of a benzimidazole effective to inhibit angiogenesis in said subject.

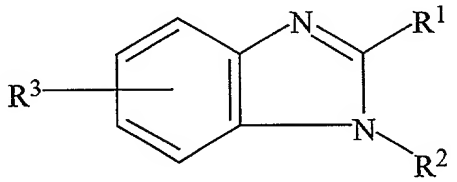
165. The method of claim 164, wherein said subject suffers from a hyperproliferative disorder.

166. The method of claim 165, wherein said hyperproliferative disorder is rheumatoid arthritis, inflammatory bowel disease or restenosis.

167. The method of claim 165, wherein said hyperproliferative disorder is cancer.

168. The method of claim 167, further comprising treating the patient with an anti-cancer therapy selected from the group consisting of a chemotherapy, a radiotherapy, an immunotherapy, or a gene therapy.

169. The method of claim 164, wherein the benzimidazole is a derivative having the formula:



wherein R^3 is selected from the group consisting of H, carboxyl ($-CO_2H$), hydroxyl, amino, chloro, difluormethoxy, benzoyl, phenyl-thio, pyridinyl, propyl-thio, diphenyl, methoxy(methoxy-dimethyl,pyridinyl)methyl-(sulfonyl), fluorophenylmethyl-2-chloro, propenyl, chloroprophyl or esters ($-CO_2R^4$) wherein R^4 is selected from the group consisting of alkoxy, haloalkyl, alkenyl, and cycloalkyl, wherein the alkyl groups have from 1 – 8 carbons, or $CH_3CH_2(OCH_2CH_2)_n-$, or $CH_3CH_2CH_2(OCH_2CH_2CH_2)_n—$, or $(CH_3)_2CH(OCH(CH_3)CH_2)_n—$, wherein n is from 1 – 3, wherein R^1 is OH, Cl, SH, carbamate or piperidin-4-yl, and R^2 is hydrogen, α-methylvinyl, 3-

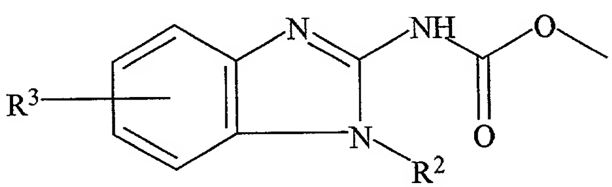
chloropropyl or piperidin-4-yl, or the pharmaceutically effective organic or inorganic salts thereof, or mixtures thereof.

170. The method of claim 169, wherein the benzimidazole derivative is methyl 5-benzoylbenzimidazole-2-carbamate (mebendazole).

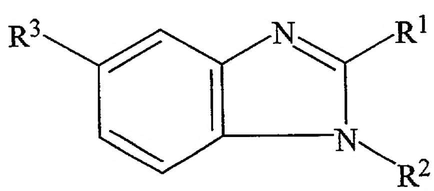
171. The method of claim 169, wherein the benzimidazole is methyl 5-(phenylthio)-2-benzimidazole carbamate (fenbendazole).

172. The method of claim 169, wherein the benzimidazole is 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole (omeprazole)

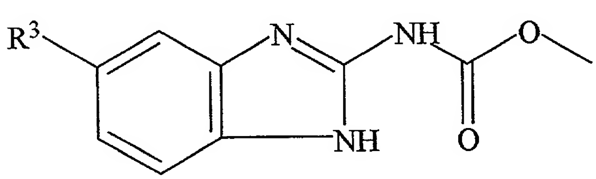
173. The method of claim 169, wherein the benzimidazole is



174. The method of claim 169, wherein the benzimidazole is



175. The method of claim 169, wherein the benzimidazole is



176. The method of claim 167, wherein benzimidazole administration comprises intratumoral administration.

177. The method of claim 164, wherein benzimidazole administration comprises systemic administration.

178. The method of claim 164, wherein benzimidazole administration comprises oral administration.

179. The method of claim 167 wherein benzimidazole administration comprises administration in the area local to a tumor in said patient.

180. The method of claim 167, wherein benzimidazole administration comprises administration in the area regional to a tumor in said patient.

181. The method of claim 164, wherein benzimidazole administration is repeated at least once.

182. The method of claim 164, wherein the dose of benzimidazole is at least 0.1 mg per kg body weight.